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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,961	08/31/2001	Seung-Cheol Hong	P54428RE	7701

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Robert E Bushnell and Law Firm  
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Suite 300  
Washington, DC 20005-1202

EXAMINER
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MYERS, PAUL R

ART UNIT	PAPER NUMBER
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2111

NOTIFICATION DATE	DELIVERY MODE
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07/09/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

<b>Office Action Summary</b>	<b>Application No.</b> 09/942,961	<b>Applicant(s)</b> HONG ET AL.	
	<b>Examiner</b> Paul R. Myers	<b>Art Unit</b> 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008 and 25 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-60 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicants filed a Petition for review by Office of Petitions. The petition was forwarded to the examiner with the following:

**(c) When a petition is taken from an action or requirement of an examiner in the ex parte prosecution of an application, or in the ex parte or inter partes prosecution of a reexamination proceeding, it may be required that there have been a proper request for reconsideration (§ 1.111) and a repeated action by the examiner. The examiner may be directed by the Director to furnish a written statement, within a specified time, setting forth the reasons for his or her decision upon the matters averred in the petition, supplying a copy to the petitioner.**

In that the petition of the issue is premature the examiner will treat the petition as a request for reconsideration.

The applicants' arguments from the petition that figure 1 is not prior art has been decided res judicata (see BPAI Decision 1/8/08). Thus, it is clear that the figure in question is prior art in view of the record as a whole. However, the examiner notes that the drawing amendment filed 6/17/08 has been entered as per MPEP 608.02(x), since amendments may not be conditionally entered. As such, the drawing requirement made by the examiner has been met. Thus, the request for reconsideration of the issue is moot.

2. Applicant's arguments filed 6/17/08 have been fully considered but they are not persuasive.

In regards to applicants argument that nothing in either 35 U.S.C. § 102 or § 103(a) equates "old" with "prior art": That is true however the language of MPEP 608.02(g) provides a form paragraph which is given when the label prior art is missing from a prior art figure. This is

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the form paragraph the examiner provided which uses the word "old". The examiner would have been perfectly happy with using the language "only that which is prior art is illustrated".

In regards to applicants argument that "the administrative record before the office demonstrates tat Figure 1 is the work of applicants": This is the first time in which applicants have presented the argument that figure 1 is the work of the applicants (i.e. applicants were the inventors of the power management control apparatus of Figure 1). However the applicants have stated that "Applicant believes that the power management control apparatus illustrated in Figure 1 is simply an example of power management control apparatus that was well-known by people with ordinary skill in the art at the time of Applicant's invention." (see BAPI decision 1/8/08 at 5 and response to requirement for information 9/29/06 at 2). Applicants have also stated "Figure 1 is simply abstract representations of the art prepared by the Applicants in an effort to illustrate Applicants' discovery of problems plagued in the art in accordance with 37 C.F.R. §1.83(b)": The examiner agrees it is an abstract representation of the state of the art at the time of applicants invention. This by definition is prior art. The identified problem (Column 2 lines 15-26) is applicants own work and not therefore prior art.

In regards to applicants argument that "nowhere does the proposed combination provide applicants structure, with such prosaic features as, by way of example, applicant's 'switching circuit provided in a heater supply line between one output of the transformer and a heater of a color display tube'": This is clearly incorrect. AAPA teaches power being supplied to the heater from a transformer and power being supplied to the microprocessor from the transformer.. Kikinis teaches cutting off power (inherently by a switch) to the heater while retaining power to the microprocessor. The combination teaches power coming from the transformer to power the

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microprocessor while power from the transformer is not supplied from the transformer to the heater. Thus the switch has no choice but to be in line between the transformer and the heater.

This response also applies to applicants arguments to claims 9, 17, 21, 31, 43.

In regards to applicants argument that “the proposed combination fails to show Applicant’s ‘heater power supply line between one output of the transformer and a heater’”: This is clearly incorrect see AAPA the line connecting Transformer (30) and CDT (90). See also applicants argument in the Oral hearing held 12/18/07 made of record 1/18/08 where applicants note that all cathode ray tubes include heaters “Now, the secondary reference doesn't talk about a heater. Now, you did provide in your remand a detailed explanation of cathode ray tubes. And they call them triodes and tetrodes, but the thing they have in there uniformly is what's called an indirectly heated cathode. That's where the heater is.” Oral hearing 1/18/08 at 9.

In regards to applicants argument that

“it is the position of the Examining staff that any electrical circuit which results in an interruption of the application of electrical power to a cathode heater” will meet the express language of Applicant's claims? Applicant submits that the proposed combination may equally be interpreted as suggesting that ‘Micro-controller 339’ via ‘Level-1 signal line 341’ causes application of electrical power with an equal amplitude but opposite polarity to that normally applied to the heater cathode, or alternatively, application of the control signal from 'Micro-controller 339' via 'Level-1 signal line 341' to activate a solenoid. to remove the heater cathode from its electrical socket. It is easily seen therefore, that the Examining staff's assertion that ‘Thus level 1 signal cuts off power to the heater (inherently done by a switch)’ is fallacious, and unsupported by the art of record”

The heater of Kikinis is able to be have power removed and reapplied: A solenoid that removes the heater from its socket and is able to return the heater to its socket is a switch. This would be within the scope of Kikinis as well as any other type of switch. Applying a voltage of equal and opposite polarity would require a switch to apply this opposite voltage. The examiner

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however notes that applying a voltage of equal but opposite voltage to the windings of a transformer would fry the transformer (the examiner has fried more than one transformer by accidentally shorting a winding to ground much less than equal but opposite level). And since the power must be able to be removed and reapplied applying an equal but opposite voltage (which would also require a switch) is not within the scope of Kikinis. A switch is clearly within the scope of the teachings of Kikinis. This response also applies to applicants arguments to claims 11, 38.

In regards to applicants argument that Kikinis does not teach or suggest a switching circuit: This is clearly incorrect. The definition of switch is: A circuit element that has two states, on and off. When on, a switch allows electrical signals to pass unimpeded. When off, it does not allow such signals to pass. A switch can be mechanical, such as a household light switch, or electrically controller, as a relay. See Microsoft press Computer Dictionary Second Edition. Kikinis teaches that the power to the heater is either on or off. Thus by definition it has a switch.

In regards to applicants argument that contrary to the examining staffs assertion the primary reference does not “cuts off power to the heater (inherently done by a switch)”, but instead regulator 20 lowers the output voltage supplied to transformer 30 ... [and] the power supplied to the heater of a cathode ray tube or color display tube (CDT 90 is lowered” The examiner never asserted that AAPA had a switch in the power line. Kikinis teaches a switch that cutting off power to a heater. This response also applies to applicants arguments to claims 2, 16, 30, 42, 60.

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In regards to applicants argument that it is impermissible to prevent the primary reference's regulator 20 from lowering the power supplied to the heater of a cathode ray tube: The combination does not prevent the regulator from lowering the power to the heater. When the switch is in the on position, the circuit would operate as normally. This response also applies to applicants arguments to claims 11, 25, 35, 38, 43, 46, 49, 51, 53, 55.

In regards to applicants argument regarding claim 7: The applicants argument regarding claim 7 is persuasive. The rejection to claims 7- 8 is removed.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-4, 9-15, 17-29, 31-41, 43-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants admitted prior art herein after AAPA in view of Kikinis PN 5,389,952.

In regards to claims 1, 9, 10, 14, 21, 23-25, 27-28, 31, 35, 38, 43, 46, 49, 51, 53, 55-56: AAPA teaches an apparatus for providing power to a display monitor, said apparatus comprising: a power supply unit (10) for converting an AC input voltage (AC) to a DC output voltage; a voltage regulator for producing a constant output voltage supplied to the monitor (20); a transformer for producing necessary operating voltages for each part of the monitor (30), in

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which the output voltage of the voltage regulator being supplied to a primary of the transformer; a feedback circuit for detecting current variation at the output of the transformer (40) and for supplying the detected variation value to the voltage regulator; a signal input port connected to a video output of a computer (50); a microcomputer operated in response to a video signal received at a video input port of the monitor (60) and a corresponding control mode indicating signal (MS); and a signal amplifier for amplifying and processing a video input signal supplied to a signal input of the color display tube (80). AAPA does not teach a switching circuit provided in a heater power supply line between one output of the transformer and a heater of a color display tube of the monitor for switching off the heater power supply line when the monitor enters a power-off mode; and the microcomputer operated in response to a video signal received at a video input port of the monitor to produce a power control signal. Kikinis teaches a microcomputer (339) operated in response to a video signal (127 specifically the HSNC and VSYNC of the video) received at a video input port (333) of the monitor (347) to produce a power control signal (341) to switch off power to the heater (Column 5 lines 3-45) Specifically level 1 “cuts off power to all circuits in the monitor 347 except microcontroller 339, interface 333, and video circuit 345” while level 2 “cuts off power to all circuits except those described above plus the CRT cathode heater” Thus level 1 signal cuts off power to the heater (inherently done by a switch). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have also been obvious to perform control via software.



In regards to claim 3: Kikinis teaches the microcomputer generating a continuous active level signal as the power control signal when the monitor enters the power-off mode. Kikinis does not state if this “active level” is positive (high) or negative (low) logic. Official notice is taken that both positive and negative logic are known. The claim would have been obvious because “a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” KSR.

In regards to claim 4: AAPA teaches a mode signal (MS) to a mode indicator (70). AAPA is silent upon the form of the mode signal. Flashing lights are known. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

In regards to claims 11, 17: Kikinis teaches interrupting power to the heater independently of other applications (the microcontroller, interface and video circuit).

In regards to claims 12, 18, 20, 22, 26, 32, 34, 37, 39-41, 44-45, 47-48, 52, 54, 57-58: Kikinis teaches interruption of the video sync signals controls the power mode selection.

In regards to claims 13, 15, 19, 29, 33, 36, 50, 59: AAPA teaches a mode indication. AAPA teaches that it is well known and expected in the art to include a mode indicator including LEDs for indicating a power mode (Fig. 1; col. 2, lines 4-14; col. 4, lines 47-60).

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5. Claims 2, 16, 30, 42, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kikinis PN 5,389,952 as applied to claim 1 above, and further in view of Heidt PN 3,703,679.

In regards to claims 2, 16, 30, 42, 60: Kikinis teaches switching off power to the heater. Kikinis is silent upon the structure of the power switch. Heidt teaches a current regulated power cutoff switch comprising: a first transistor (28) for switching on or off the power supply line between the input 20 and the output (24) in response to a base bias current supplied from said output of the transformer (via resistor 34); a second transistor (32) for selectively switching a base bias current path of the first transistor to ground (via resistor 36); and a third transistor (42 or alternatively 46) for selectively switching a operating voltage supply line to a base bias resistor (50 in conjunction with 49) of the second transistor (32) to ground (via 56) in response to the level of the power control signal supplied (60). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

***Allowable Subject Matter***

6. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 7-8 are allowed. The examiner was unable to find a mode indicator that had both the power control signal and the mode indicating signal applied to it.

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Even though it is not required that the examiner introduce evidence that figure 1 is prior art the examiner is citing patents 4,151,444 4,626,977 4,645,989 4,658,342 4,680,511 4,686,430 4,709,321 4,742,270 4,864,481 and 5,034,666 all of which in general show the prior art power management control apparatus of figure 1. Mapping for instance 4,709,321 to applicants admitted prior art figure 1. You have AC input (10), power supply (11) voltage regulator (12, 41-55), transformer (15, 45), 1st aux power supply (44,45,51), 2nd aux power supply (15,16,20,21), feedback circuit (56-61, 34-37), input port (23), micro computer (22), power signal (34), and color display tube (24). Also inherently a signal amp.

The examiner notes patents 4,258,297 4,504,767 4,554,489 4,980,836 5,553,294 5,686,887 5,697,717 5,710,929 and 4,980,836 all of which show a mode indicator LED. The examiner notes PN 4,980,836 that teaches a mode indicating LED which flashes. But teaches separate Mode indication signal and Power control signal with the power control signal not also supplying the mode indication LED.

The examiner notes Patents 4,686,616 5,119,262 4,656,573 4,679,131 4,689,730 4,740,877 4,841,201 5,331,532 5,672,940 3,649,870 3,701,007 3,737,572 3,740,571 3,742,371 and 3,836,813 all of which show features of prior art figure 1.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul R. Myers whose telephone number is 571 272 3639. The examiner can normally be reached on Mon-Thur 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner  
Art Unit 2111

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